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(71) Applicant(s)
New Venture Gear Inc
(Incorporated in USA - Michigan)
1650 Research Drive, Suite 350, Troy, Michigan 48063,
United States of America

(72) Inventor(s)
Robert J Wilson
Randolph C Williams
John D Zalewski

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(56) Documents Cited by ISA

US 5036940 A US 4883138 A US 4878399 A
US 4677873 A

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US 74/335 665F,665GA:180/247,248,475/198, 199,204,
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(72) cont

Sanjeev K Varma
David Sperduti

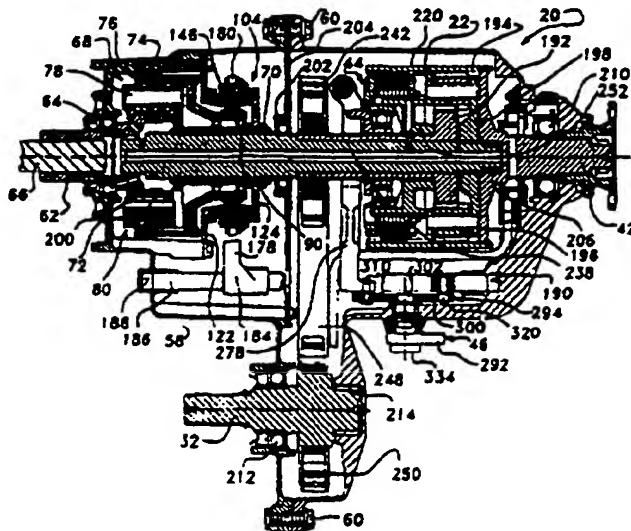
(74) Agent and/or Address for Service

J. A. Kemp & Co.
14 South Square, Gray's Inn, LONDON, WC1R 5LX,
United Kingdom

(54) Abstract Title

Full-time transfer case with synchronized gear reduction unit

(57) A power transfer system (10) is disclosed for a four-wheel drive vehicle operable for permitting a vehicle operator to select between various full-time and part-time four-wheel drive modes. The power transfer system (10) includes a transfer case (20) equipped with a gear reduction unit (68) and a synchronized range shift mechanism (104) operable for permitting the vehicle operator to shift on-the-fly for establishing full-time and part-time high-range and low-range four-wheel drive modes. The transfer case (20) is also equipped with an electronically-controlled slip limiting/torque-biasing arrangement including an interaxle differential (22) and a transfer clutch (44) operable for controlling the magnitude of speed differentiation and torque biasing across the interaxle differential (22).



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